CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 81-16

AN ORDER AMENDING ORDER NO. 76-126 AND ESTABLISHING CLOSURE REQUIREMENTS FOR:

CITY OF ALAMEDA AND ALAMEDA CITY DISPOSAL COMPANY
CLASS II-2 SOLID WASTE DISPOSAL SITE
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. The disposal site is owned by the City of Alameda and is operated by Alameda City Disposal Company, who will be collectively referred to hereinafter as the discharger. The site is located adjacent to San Leandro Channel north of Doolittle Drive, as shown in Attachments A and B, which are incorporated herein and made part of this Order.

2. The Alameda Landfill began operation in 1953. The site is bounded on the north, east, and west sides by levees and on the south side by Doolittle Drive. The site has been used for disposal of municipal refuse and other group 2 and 3 wastes. The site stopped accepting waste February 28, 1981.

3. This Board, on November 16, 1976, adopted Waste Discharge Requirements as Order No. 76-126 for this site.

4. This Board, on October 17, 1978 and April 17, 1979 adopted Cease and Desist Order Nos. 78-86 and 79-47 which are still in effect. These Orders required the discharger to construct leachate control facilities which have been completed. The effectiveness of these facilities is being evaluated.

5. The site is underlain by 25 to 35 feet of clayey silt, commonly known as bay mud which in turn, is underlain by stiff clays. There are no ground water wells in the immediate vicinity of the landfill. Land within 1,000 feet of the site is used for a golf course, a highway, residential development, and a wildlife refuge.

6. The beneficial uses of San Leandro Channel, San Leandro Bay and San Francisco Bay are:

   a. Resting and habitat for waterfowl
   b. Fish and shellfish habitat
   c. Recreation
   d. Esthetic enjoyment

7. The discharger submitted a report titled "Technical Information Site Closure Plan Alameda Landfill, Alameda, California" dated February 28, 1979. This plan addresses final cover, site drainage and grades, stability, and leachate control and monitoring. The plan assumes that the leachate barrier recently completed will be effective. If it is found that the barrier is ineffective then it may be necessary to revise the closure plan. This report is consistent with this Board's closure criteria contained in Resolution 77-7 and State Water Resources Control Board guidelines. The ultimate use of the site has not been determined, but it is likely that the site will be converted to park usage.

8. The Board adopted a Water Quality Control Plan for the San Francisco Bay Basin in April 1975 and this Order implements the Water Quality Objectives stated in that Plan.

9. This Board has notified the discharger and interested agencies and persons of its intent to prescribe closure requirements for the landfill and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

11. This project involves the closure of a publicly owned Class II-2 facility with minor alterations to the land. Consequently, this project will not have a significant effect on the environment based upon the exemption provided in Section 15104, Title 14, California Administrative Code.

12. This landfill site, subsequent to modifications required to comply with this Order, will meet the criteria contained in the California Administrative Code, Title 23, Chapter 3, Subchapter 15, for classification as a Class II-2 disposal site which has received Group 2 and Group 3 wastes.

IT IS HEREBY ORDERED THAT the City of Alameda and Alameda City Disposal Company shall comply with the following:

A. Order No. 76-126 is amended to add the following as Section D.

"D. Site Closure Specifications

1. This solid waste disposal site shall be closed in compliance with this Board's Resolution No. 77-7 and in accordance with the report indicated in Finding 5.

2. No group 1 or additional group 2 wastes shall be stored or deposited on this site.

3. The exterior surfaces of the site shall be graded to a minimum of three percent in order to promote lateral runoff of precipitation and to minimize the infiltration of precipitation. In addition, the site shall be covered with a minimum of three feet of clean soil, one foot of which is to be compacted to attain a permeability no greater than 10^{-6} cm/sec.

4. The completed disposal area shall remain protected from any washout or erosion which could occur as a result of a flood having a predicted frequency of once in 100 years. The perimeter drainage ditches and all other facilities shall be maintained to convey maximum anticipated storm runoff and to withstand differential settlement. These facilities shall be constructed over a natural ground or through lined channels or pipes.

5. The migration of methane gas from the disposal site shall be monitored and controlled as necessary to prevent the creation of nuisance. The need for increased methane controls shall be reviewed at any time it is deemed necessary by the Executive Officer."

B. The discharger shall comply with Specifications D.1 and D.3 of Order No. 76-126 as amended by this Order according to the following time schedule:

Task	Compliance Date
a. Submit documentation that funds for closure are or will be available	by September 1, 1981
b. Submit final grading and surface drainage plan, land use plan and detailed time schedule for closure plan implementation	by October 1, 1981
c. Submit reports on the status of implementing the closure plan	by March 1, 1982 and August 1, 1982
d. Achieve full compliance	by December 1, 1982
e. Submit report signed by a registered civil engineer or certified engineering geologist, documenting that full compliance has been achieved according to the closure plan specifications	by January 15, 1983

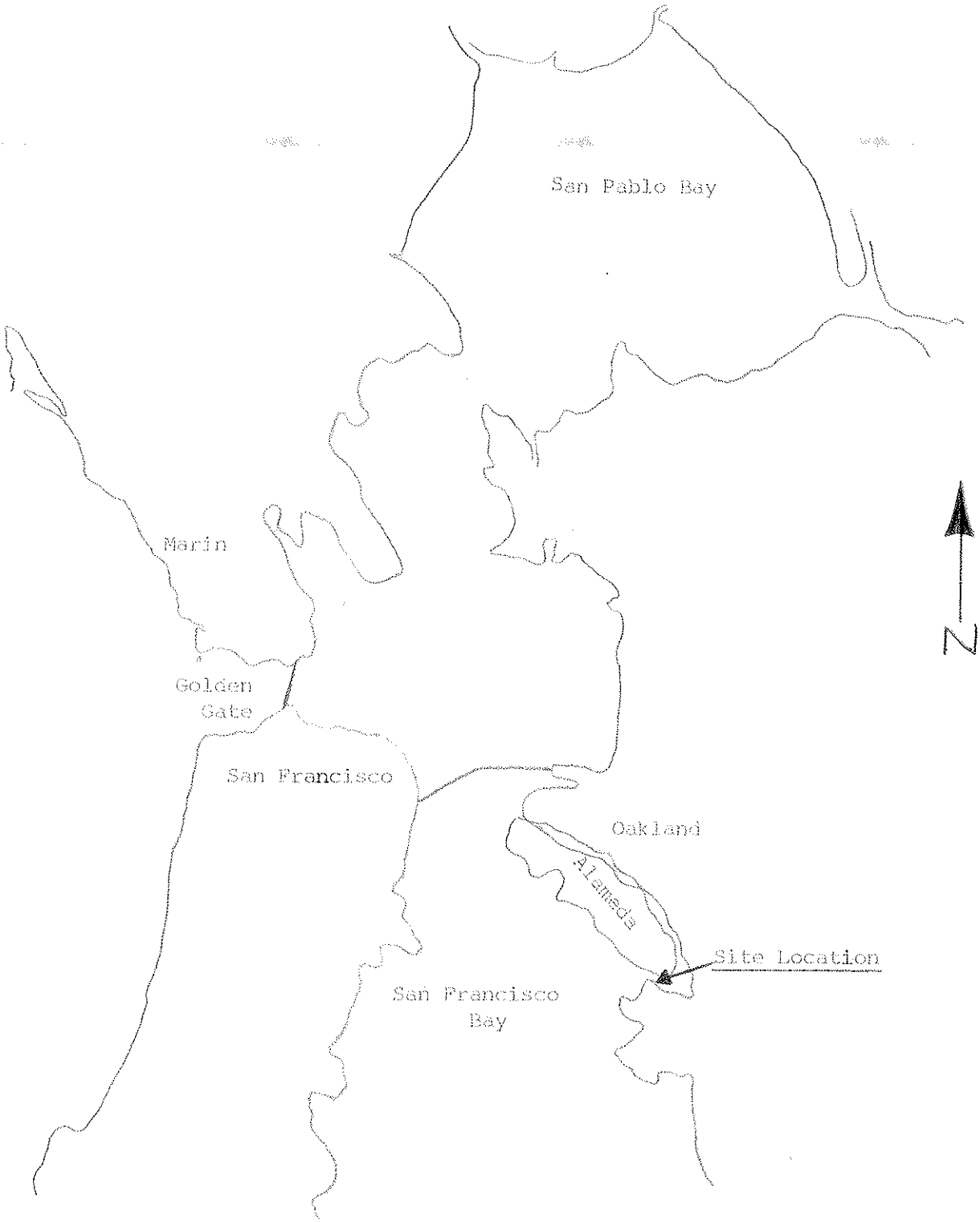
C. The discharger shall demonstrate compliance with Specification D.5 of Order No. 76-126 as amended by this Order according to the following time schedule:

Task	Compliance Date
a. Install monitoring wells	September 15, 1981
b. Submit a report on monitoring with plans and compliance time schedule if non-compliance is demonstrated	February 15, 1982
c. Demonstrate full compliance	July 1, 1982

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 18, 1981.

FRED H. DIERKER
Executive Officer

Attachments:
A - Map
B - Map



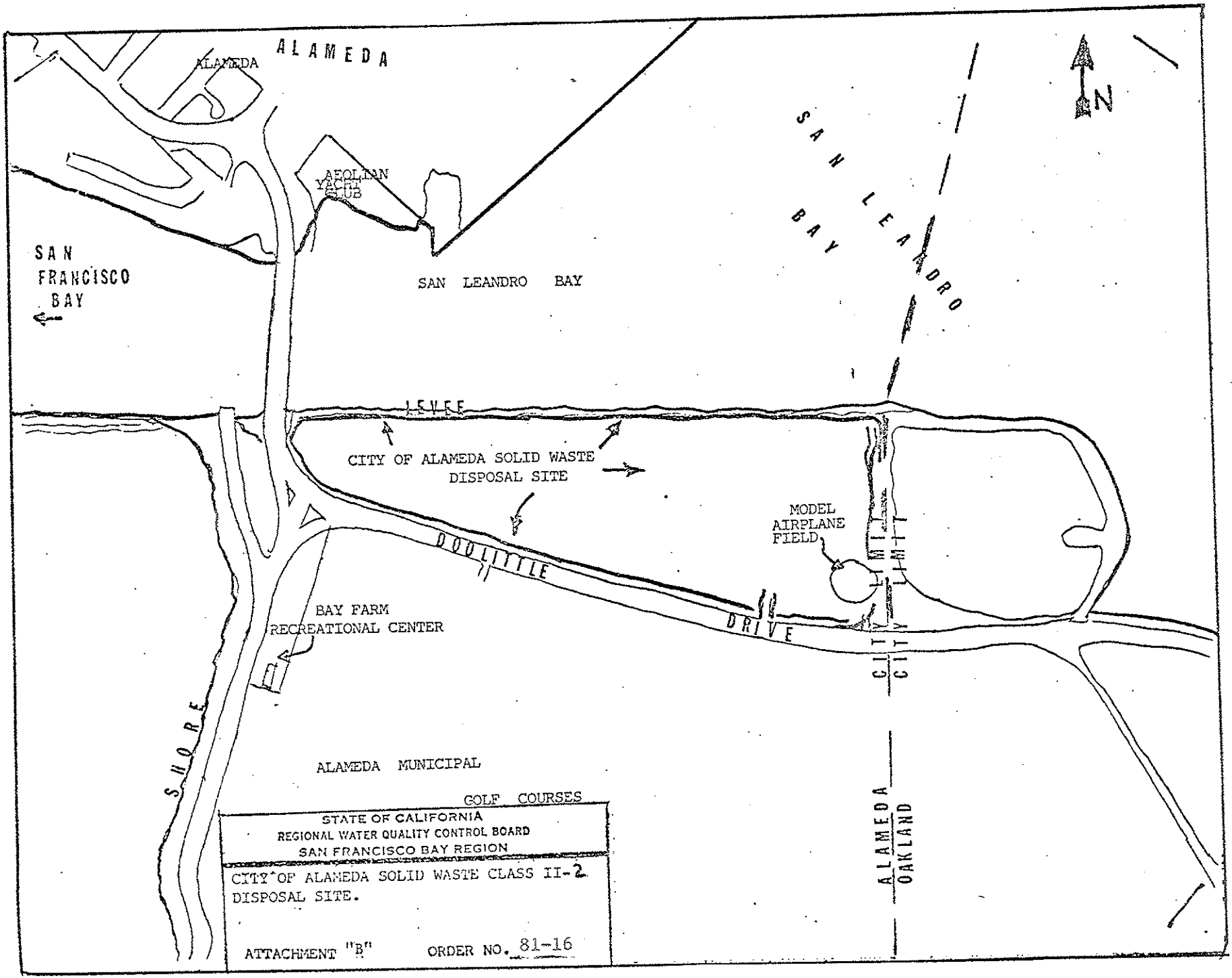
STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

City of Alameda Solid Waste Class II-2 Disposal Site

LOCATION OF SITE

Attachment A Oder No. 81-16

DRAWN BY: CER	DATE: 2-17-81	DRWG. NO.


ALAMEDA
ALAMEDA
AEOLIAN YACHT CLUB
SAN FRANCISCO BAY
SAN LEANDRO BAY
SAN LEANDRO BAY
N
LEVEE
CITY OF ALAMEDA SOLID WASTE DISPOSAL SITE
MODEL AIRPLANE FIELD
DOOLITTLE DRIVE
CITY LIMIT
CITY LIMIT
BAY FARM RECREATIONAL CENTER
SHORE
ALAMEDA MUNICIPAL GOLF COURSES
ALAMEDA
OAKLAND
STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
CITY OF ALAMEDA SOLID WASTE CLASS II-2 DISPOSAL SITE.
ATTACHMENT "B"
ORDER NO. 81-16

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

UPDATED
DISCHARGE MONITORING PROGRAM

FOR

CITY OF ALAMEDA.
ALAMEDA CITY DOOLITTLE LANDFILL
CLASS III SOLID WASTE DISPOSAL SITE
ALMEDA, ALAMEDA COUNTY

ORDER NO. 81 - 16

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Discharge Monitoring Program is issued in accordance with Chapter 15, Article 5.

The principal purposes of a discharge monitoring program are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of standards of performance, and toxicity standards, (4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any surface water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill areas, the surface runoff from the site, Spring Branch are considered receiving waters.

3. Standard observations refer to:

a. Receiving Waters

1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.
2) Discoloration and turbidity: description of color, source, and size of affected area.
3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
4) Evidence of beneficial use: presence of water associated wildlife.
5) Flow rate.
6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

b. Perimeter of the waste management unit.

1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)
2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
3) Evidence of erosion and/or daylighted refuse.

c. The waste management unit.

1) Evidence of ponded water at any point on the waste management facility.
2) Evidence of odors, presence or absence, characterization, source, and distance of travel

from source.

3) Evidence of erosion and/or daylighted refuse.

4) Standard Analysis (SA) and measurements are listed on Table A (attached)

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 2550.7(b) and
2. Surface water per Section 2550.7(c)

and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling.

3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.

5. Calculation of results.

6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.3 below. The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Each monitoring report shall include a compliance evaluation summary. The summary shall contain:

1) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approved by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the

units, and a discussion of the leachate disposal methods utilized.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

2. CONTINGENCY REPORTING

a. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days thereafter. This report shall contain the following information:

1) a map showing the location(s) of discharge;
2) approximate flow rate;
3) nature of effects; i.e. all pertinent observations and analyses; and
4) corrective measures underway or proposed.

b. A report shall be made in writing to the Board within seven days of determining that a statistically significant difference occurred between a down gradient sample and California and Federal Drinking Water Standards (Maximum Contaminant Levels, MCLs). Notification shall indicate what MCLs has/have been exceeded. The discharger shall immediately resample at the compliance point where this difference has been found and re-analyze.

c. If resampling and analysis confirms the earlier finding of a statistically significant difference between monitoring results and MCLs the discharger must submit to the Board an amended Report of Waste Discharge as specified in Section 2550.8(k)(5) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of Section 2550.9 of Chapter 15.

d. Within 180 days of determining statistically significant evidence of a release, submit to the

regional board an engineering feasibility study for a Corrective Action Program (CAP) necessary to meet the requirements of Section 2550.10. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

3. REPORTING

By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a $5^1/_4$" computer data disk, MS-DOS ASCII format, tabulating the year's data.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A map showing the area, if any, in which filling has been completed during the previous calendar year.

d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.

e. An evaluation of the effectiveness of the leachate monitoring/ control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each sampling well established for this monitoring program, as well as a report of inspection or

certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

B. ON-SITE OBSERVATIONS - Report Semi-annual

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-`n'	Located on the waste disposal area as deli-neated by a 500 foot grid network.	Standard observations for the waste management unit.	Weekly
P-1 thru P-`n' (per-imeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Weekly
L-1 thru L-'n'	At each point of discharge. Include a map indicating locations of discharge(s)	Standard test as outlined in on Table A. Grab sample taken at a tide elevation less than +0.5 ft above MLLW Alameda datum	Semi-annual

C. GROUND WATER and SURFACE WATER MONITORING - Report Semi-annual

Groundwater and surface water shall be monitored as outlined below and on Table A (Attached) and shown on Figure A (Attached). Control Chart Approach shall be used for Statistical Evaluation of data.(Each well is used as its own background).

Monitoring Points:

	Downgradient Point	Upgradient Point
Surface Water	SW3,SW4(downstream)	SW5,SW6 (upstream)
Groundwater	MW1,MW2,MW3,MW4,MW5 G1A,G2A,G3A,G4A,G6A	G5A
Bay mud	MW1,MW2,MW3,MW4,MW5	
Debris zone(Leachate)	G1A,G2A,G3A,G4A,G6A GR1A,GR2A,GR3A,GR4, GR5	G5A

E. FACILITIES MONITORING

The Discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report semi-annually. The facilities to be monitored shall include, but not be limited to:

a. Leachate Collection and Removal System
b. Surface water impoundment
c. Leachate handling facilities
d. Perimeter diversion channels
e. Leachate Management facilities and secondary containment.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 81-16.

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the

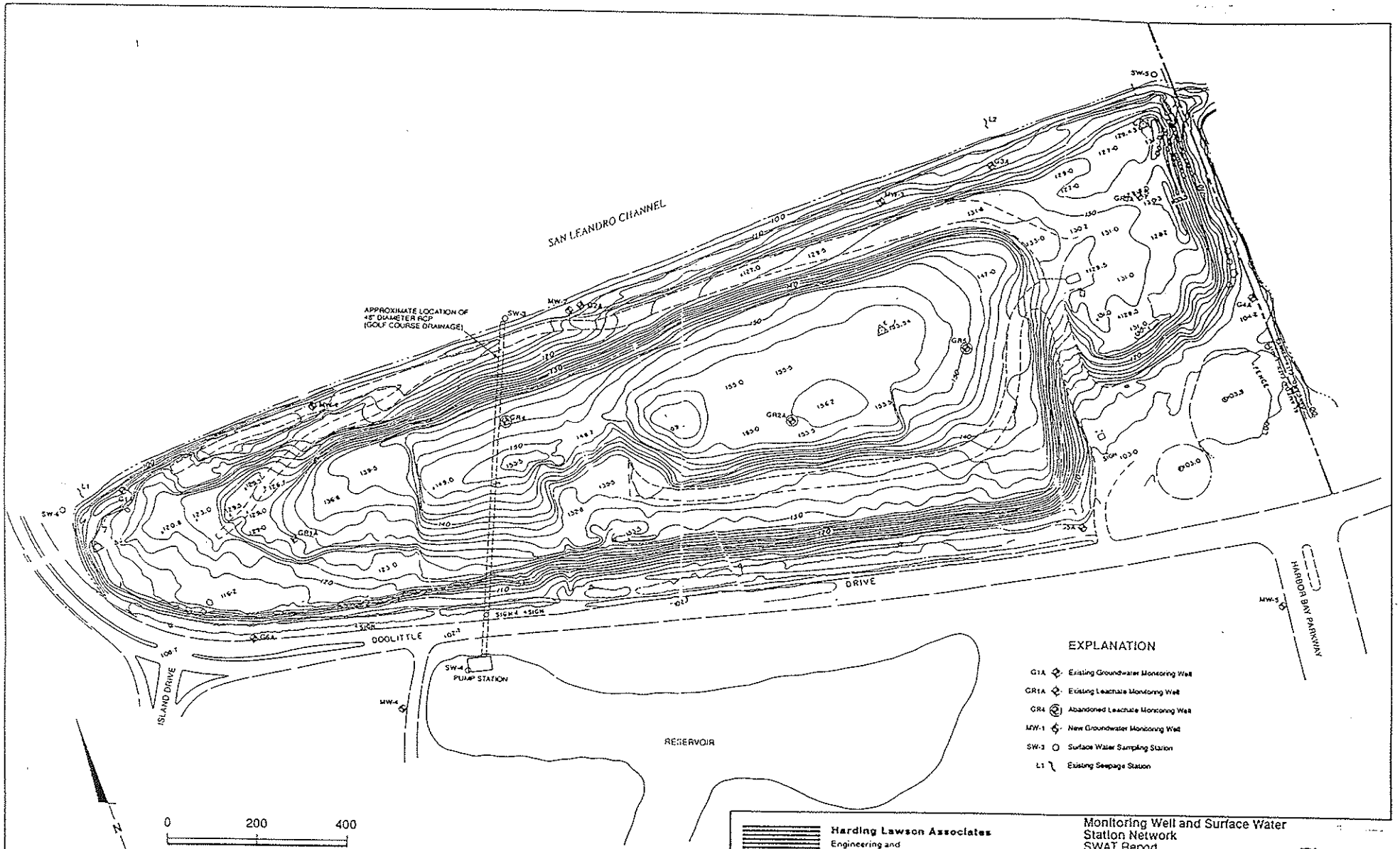
effective date, upon written notice from the Executive Officer.

Steven R. Ritchie
Executive Officer

Date Ordered: June 17, 1994

Attachment: Figure'A - Site Map
Table A - Schedule for Sampling, Measurement, and Analysis

31386



DIETERICH-POST 130713

Harding Lawson Associates
Engineering and Environmental Services

Monitoring Well and Surface Water Station Network
SWAT Report
City of Alameda Doolittle Landfill
Alameda, California

Figure A

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
LZ	20702 2.5	BCD.	5/93	

Table A - Discharge Monnitoring Plan, List of Analytical Parameters

Water elevation level	Field	Semi-annual	1
Temperature	Field	Semi-annual	1
Leachate elevation level	Field	Semi-annual	1
pH	9040	Semi-annual	3
Turbidity	Field	Semi-annual	1
Nitrate nitrogen	9200	Semi-annual	3
1,1,1-Trichloromethane	8010/8020	Semi-annual	3
Total organic carbon	415.1	Semi-annual	2
Benzene	8010/8020	Semi-annual	3
Chlorobenzene	8010/8020	Semi-annual	3
1,4 Dichlorobenzene	8010/8020	Semi-annual	3
Trichloroethylene	8010/8020	Semi-annual	3
Vinyl chloride	8010/8020	Semi-annual	3
Arsenic	7060	Semi-annual	3
Silver	6010	Semi-annual	3(b)
Cadmium	6010	Semi-annual	3
Mercury	7470	Semi-annual	3
Lead	6010	Semi-annual	3
Selenium	7740	Semi-annual	3

1. Not Applicable
2. Method for Chemical Analysis of Water and Wastes, EPA600/4/79/029, revised March 1983.
3. EPA SW-846

(a)groundwater samples only
(b)surface water samples only